

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for accelerating storage access in a network, said method comprising:

- a) receiving a data record having a plurality of data segments as a received data record;
- b) saving said data segments in a local memory of a network controller (NC);
- c) assigning a virtual write buffer (VWB) entry, in said NC local memory, for the ~~incoming-received~~ data record;
- d) reassembling said data segments of said data record using said VWB entry to form a reassembled data record; and,
- e) sending said reassembled data record from the network controller directly to an I/O controller of a storage device.

2. (Currently Amended) The method of claim 1, further comprising:
allocating a private buffer to a memory address space in a host local memory.

3. (Original) The method of claim 1, wherein said NC is coupled to a storage target system and to a network.

4. (Original) The method of claim 2, wherein the data segments are virtually reassembled in said NC local memory to form a reassembled data record.

5. (Original) The method of claim 1, wherein said I/O controller is further coupled to a storage device.

6. (Previously Presented) The method of claim 1, wherein the data is received using a sub-process comprising:

- i) performing a transport layer processing on the data segments; and,
- ii) assigning a memory object descriptor (MOD) to each of the data segments.

7. (Original) The method of claim 6, wherein each said MOD points to a memory location where a corresponding data segment is stored in the NC local memory.

8. (Original) The method of claim 6, wherein said MODS are linked together to form a record structure.

9. (Original) The method of claim 2, wherein an available private buffer is used from a pool of pre-allocated private buffers.

10. (Previously Presented) The method of claim 2, wherein said NC maintains a VWB table, wherein said VWB table includes at least a VWB entry.

11. (Original) The method of claim 10, wherein said VWB entry comprises at least two subentries, wherein a first sub-entry is an offset field and a second sub-entry is a pointer field.

12. (Currently Amended) The method of claim 11, wherein ~~the~~ a memory address space ~~of~~ utilized by said VWB entry is mapped to the memory address space of the allocated private buffer when the VWB entry is assigned.

13. (Original) The method of claim 11, wherein reassembling said data segments comprises setting said offset field and said pointer field.

14. (Original) The method of claim 13, wherein setting said offset field and said pointer field further comprises:

- i) iteratively, for each MOD, determining a size of a corresponding data segment pointed by said each MOD;
- ii) setting said offset field to a size of said corresponding data segment pointed by said MOD; and,

iii) setting said pointer field to point to said each MOD.

15. (Original) The method of claim 14, wherein a VWB entry is associated with each said allocated private buffer.

16. (Original) The method of claim 15, wherein the reassembled data record is sent to the I/O controller using a sub-process comprising:

- a) providing said I/O controller with an address space of said private buffer associated with said VWB entry;
- b) translating the address space of said VWB entry to a physical address location of said reassembled data record;
- c) obtaining said reassembled data record from said physical address location; and,
- d) sending said reassembled data record directly to said I/O controller over an I/O bus.

17. (Original) The method of claim 16, wherein said physical address location designates a location of said reassembled data record in the NC local memory.

18. (Original) The method of claim 16, wherein said I/O controller is provided with the address of said private buffer, upon initiating a direct memory access (DMA) request by said I/O controller.

19. (Currently Amended) The method of claim 16, wherein the NC sends said reassembled data record; upon a reception of a DMA read request initiated by said I/O controller.

20. – 59. (Cancelled)